2004 CROP SUMMARY

The winter of 2004 began with abnormally mild December temperatures and below-normal precipitation across most of the State. During January, below-average precipitation and colder than average temperatures caused frost to penetrate into the soil. February brought milder temperatures and enough snow, especially in the northern districts, to prevent further frost penetration and possible damage to pastures and alfalfa stands. The first half of March was colder than average. As temperatures warmed, melting snow and light rainfall were readily absorbed by the dry soils with little or no runoff.

Dry weather in early April allowed an early start to spring planting. Topsoil moisture was rated short or very short for two-thirds of the State. Full-scale fieldwork began around April 16th. Planting of small grains ran well ahead of the 5-year average as temperatures stayed close to seasonal averages. The dry conditions led to an abundance of wildfires in mid-April. By the end of the month, widespread rains improved topsoil moisture supplies. Sugarbeet, corn, and soybean planting progress was running well ahead of the 5-year average by the end of the month.

In May, drier conditions helped field work to move forward rapidly. Temperatures in May averaged 3.6 degrees below seasonal averages. By late May, enough rain had fallen that topsoil moisture levels were adequate throughout the state and surplus in the northwest district. Field work was delayed, but in spite of the cool temperatures crop emergence was at or slightly ahead of the 5-year average for corn, soybeans, and small grains.

Temperatures were below seasonal averages for three of the four weeks in June, with the last week being the coolest, averaging 9.4 degrees below normal. Precipitation amounts during the first half of the month were above normal, resulting in standing water in some fields. By the end of the month, with growing degree days falling progressively further behind seasonal averages, crop development was lagging behind the 5-year average, with the effect most pronounced on the small grains as they progressed from the jointed to the heading stage of development.

Warmer temperatures in early July, followed by rain, enabled crop development to advance more quickly. By the latter part of July, consistently below-average precipitation resulted in short topsoil moisture over much of the central and eastern part of the State. Continued below-average temperatures for the rest of July delayed the ripening of small grains and caused row-crop development to lag behind the 5-year average. Nevertheless, by the end of the month, many small-grain producers reported that the condition of their oats, wheat, and barley was generally good to excellent. The percent of corn rated good to excellent was 68 percent and soybeans 58 percent as of July 30th.

On August 3rd, heavy rain, hail, and winds gusting from 50 to 80 miles per hour hit the southernmost counties of Minnesota, flattening some small grain and corn fields. Producers statewide reported that most of the corn crop was two weeks behind, with the harvest of small grain well behind the previous five years. On August 5th, Tower, MN reported a new State record low of 26 degrees for that date. The week of August 8th temperatures averaged 10.6 degrees below normal and the week of August 15th, 8.5 degrees below normal. Freezing temperatures were recorded in parts of the State on August 20th. Although temperatures began to warm somewhat by the end of August, growing degree day totals ranged from 219 degree-days behind normal in Rochester to 617 degree-day units behind in Crookston. The lack of warmth resulted in a progressive decline in the condition of both the corn and soybean crop by the end of the month. At that time, 49 percent of the corn and only 44 percent of the soybean crop was rated in good to excellent condition. Topsoil moisture conditions were generally adequate in most parts of the State during August.

Consistently above-average temperatures throughout the month of September, coupled with adequate topsoil moisture and rain, improved crop conditions. Corn was rated 60 percent good to excellent condition by the first week of October. There was only small improvement in the soybean crop condition, which had been damaged in many areas by frost during August.

Frost was reported across most of the State at the end of September. Soybean harvest was in full swing the first week of October, while corn harvest was beginning the second week of October. Harvest was helped by warm, dry conditions the first three weeks of October, with over five days available for field work each week. By October 23rd, corn harvest was only 28 percent complete compared with the five-year average of 68 percent. The moisture content of the corn averaged 24 percent at harvest, compared with the 5-year average of 18 percent. By that same date, harvest of sugar beets, potato, dry beans and soybean was nearly complete. By contrast, harvest of corn and sunflowers continued to lag well behind the five year average, in part because of average to above average rainfall during the last week of October.

Temperatures in November were consistently above normal, but wet soils continued to make corn harvest and fall tillage difficult. Topsoil moisture conditions at the end of the month were 79 percent adequate and 20 percent surplus. Subsoil moisture conditions were 77 percent adequate and 18 percent surplus, far better than at the same time the previous year.